

## 03—324 Renewing front crankshaft radial sealing ring

### Tightening torques

Nm

Bolt M 18 x 1.5 x 45 to crankshaft

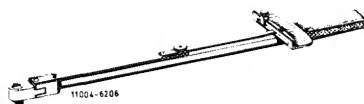
270—330

Bolts M 8 x 20

35

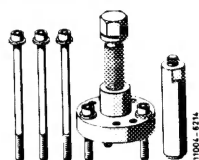
### Special tools

Torque wrench 3/4" square,  
150—500 Nm



001 589 31 21 00

Puller for balancing disc



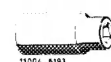
116 589 10 33 00

Detent



110 589 00 40 00

Socket 27 mm, 1/2" square



001 589 65 09 00

Puller for spacing ring



102 589 00 33 00

Installer for radial sealing ring



130 589 00 61 00

### Conventional tool

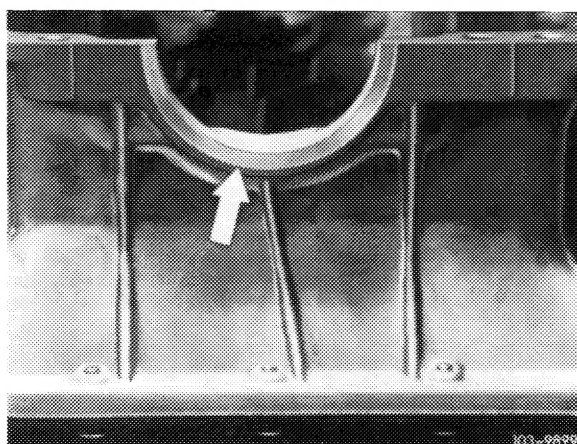
Adapter 3/4" square socket  
to 1/2" square head

e.g. made by Hazet, D—5630 Remscheid  
order no. 1058 R-1

### Note

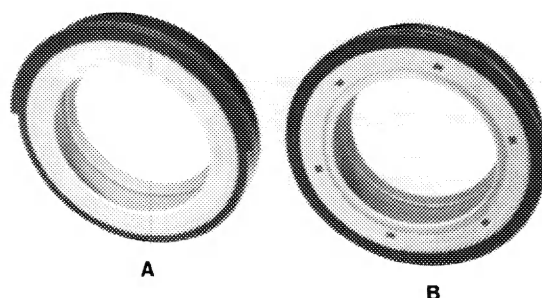
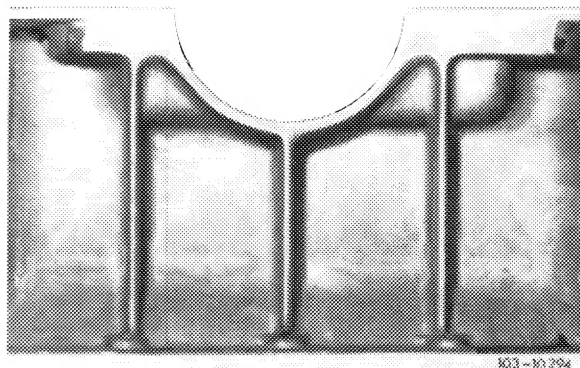
On these engines, there are oil pans with and without machined face on mounting bore for radial sealing ring (arrow).

On oil pans with unmachined face, only radial sealing rings with half shoulder and on oil pans with machined face rings with half and all-around shoulder may be installed.



Oil pan with machined face

Oil pan with unmachined face



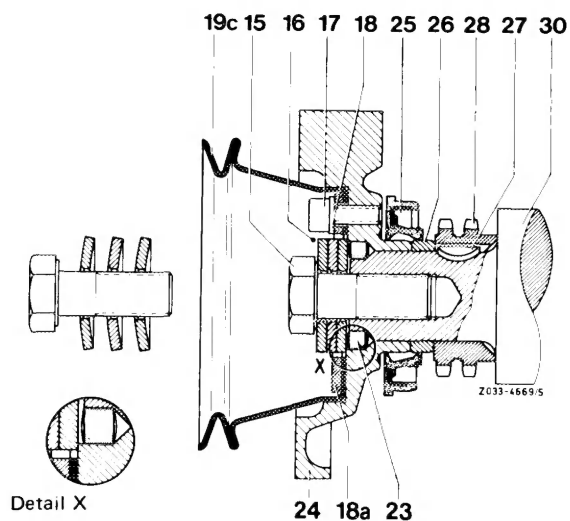
- A Radial sealing ring with half shoulder  
B Radial sealing ring with all-around shoulder

103-9897

## Removal

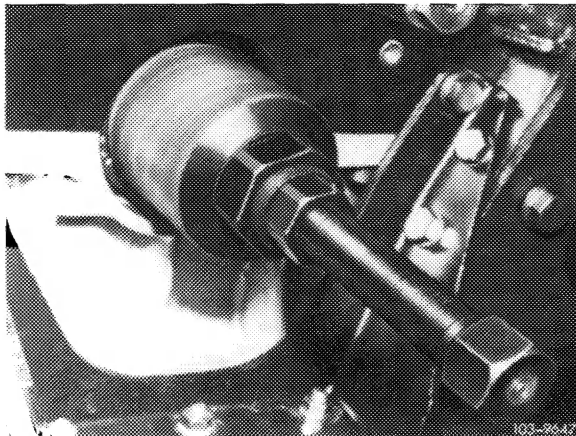
- 1 Remove cooler and fan.
- 2 Remove pulley (19c) and balancing disc (24) (03-340).

- |                         |                        |
|-------------------------|------------------------|
| 15 Bolt M 18 x 1.5 x 45 | 24 Balancing disc      |
| 16 Plate springs        | 25 Radial sealing ring |
| 17 Bolts M 8 x 20       | 26 Spacing ring        |
| 18 Washer               | 27 Woodruff key        |
| 18a Thrust washer       | 28 Crankshaft gear     |
| 19c Pulley              | 30 Crankshaft          |
| 23 Set pin 8 x 8        |                        |



- 3 Force out radial sealing ring by means of a screwdriver, making sure that the crankshaft journal and the mounting bore are not damaged.

- 4 Remove spacing ring with puller, if noticeably worn.



### Installation

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- 5 Deburr mounting bore for radial sealing ring and clean.

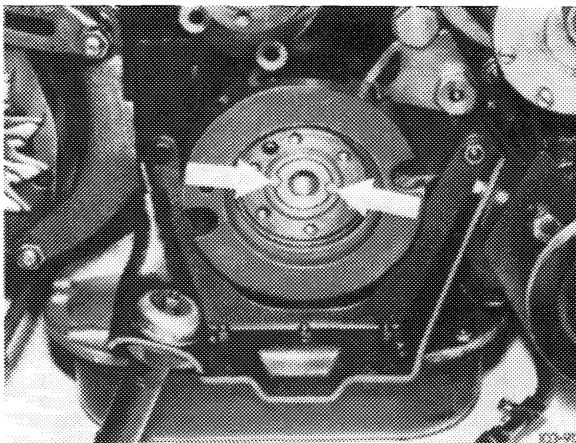
**Note:** Do not coat mounting bore and radial sealing ring with sealing compound.

- 6 Install new spacing ring.

- 7 Moisten new radial sealing ring with oil at sealing lip and in the dust-sealing lip area and mount with installer.

### Attention!

The radial sealing ring should be accurately square in relation to crankshaft journal, since otherwise no perfect sealing will be obtained.



- 8 Install balancing disc and pulley (03-340).

- 9 Install fan and cooler.